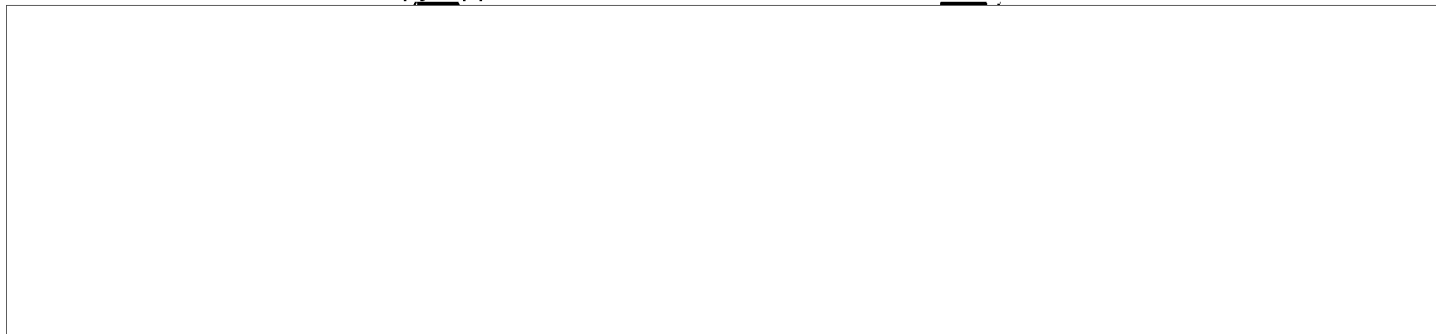




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25X1

FINANCIAL AND STATUS REPORT

OCTOBER 1957

U.S. 132

TASK V



25X1



92-40-16

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I. FINANCIAL

Funds authorized	\$60,000
Funds Expended (As of Nov. 3, 1957)	16,818
Funds Committed	0
Funds Remaining	43,182

II. STATUS

Image Recognition

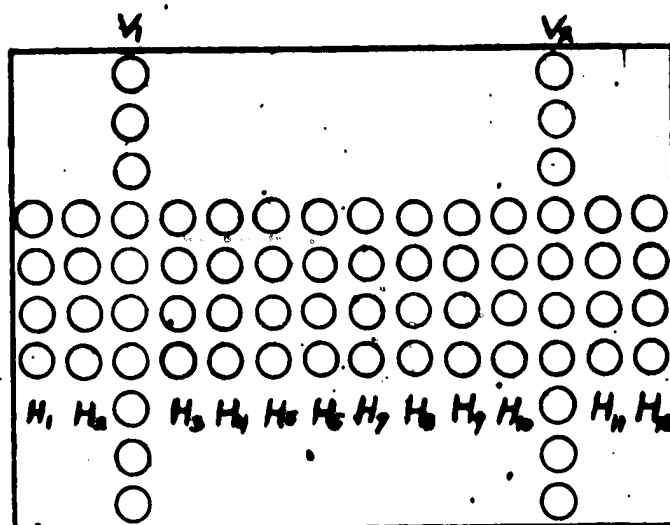
The unit for making sensitivity measurements was calibrated and tests were made in the field on actual vehicles. Changes in current in the lead sulfide photo cell produced by a vehicle moving across the field of view were measured. The results of these tests indicate that the cells tested have sufficient sensitivity for this application.

The attached sketch shows an array of 68 miniature photo cells which is being proposed for a test of principles. Two rows of 10 cells each labelled V1 and V2 provide means for determining the height of the object, at intervals, as it passes across the field of view. The horizontal position of the leading edge of the object is detected by rows of photo cells H₁, H₂, H₃ etc instead of the previously proposed slots. The use of short vertical rows of photo cells is a possible alternative to the slot and lens system discussed in the October report. The lens system described there is being evaluated by means of a small lucite cylindrical lens element which has been made and is being tested. An evaluation of the two systems will weigh the optical simplicity of one against the circuit simplicity of the other as well as make a comparison of their performance.

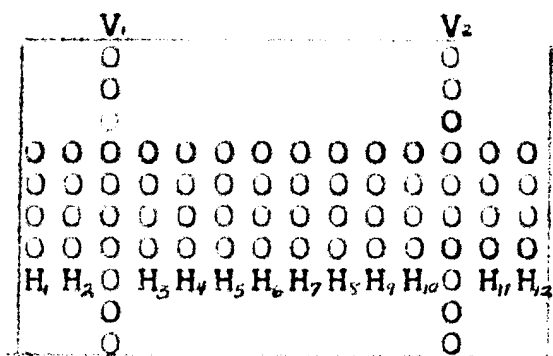
Study has shown that the lucite light collector approach mentioned in the previous report has serious disadvantages.

Tests are being made on the scanner which include processing the output from the photo multiplier tube by means of a Berkeley Counter-Timer and a Digital Recorder. The tests are meeting with some success and are expected to be useful in the initial evaluation of recognition patterns of test images.

Circuits are being studied to provide signal level discrimination for the photocell outputs. Because a rather large number of cells is involved, the objective is to obtain the simplest possible circuit, and transistors will probably be used.



Multiple Photocell Array



Multiple Photocell Array